Exploring Aeronautics			
2003 Science			
Content Standards			
New Mexico Science			
Grade 5			
Activity/Lesson	**State**	**Standards**	
Fundamentals of Aeronautics (145-176)	NM	SCI.5.I.I.I.3	Use graphic representations (e.g., charts, graphs, tables, labeled diagrams) to present data and produce explanations for investigations.
Fundamentals of Aeronautics (145-176)	NM	SCI.5.II.I.III.4	Understand that when a force (e.g., gravity, friction) acts on an object, the object speeds up, slows down, or goes in a different direction.
Airplane Control(209-256)	NM	SCI.5.II.I.III.4	Understand that when a force (e.g., gravity, friction) acts on an object, the object speeds up, slows down, or goes in a different direction.
Tools of Aeronautics(257-326)	NM	SCI.5.I.I.I.2	Use appropriate technologies (e.g., calculators, computers, balances, spring scales, microscopes) to perform scientific tests and to collect and display data.
Tools of Aeronautics(257-326)	NM	SCI.5.II.III.II.2	Know that air is a substance that surrounds Earth (atmosphere), takes up space, and moves, and that temperature fluctuations and other factors produce wind currents.
How an Airplane Flies	NM	SCI.5.II.I.III.4	Understand that when a force (e.g., gravity, friction) acts on an object, the object speeds up, slows down, or goes in a different direction.
Science of Flight	NM	SCI.5.I.I.II.1	Understand that different kinds of investigations are used to answer different kinds of questions (e.g., observations, data collection, controlled experiments).
Science of Flight	NM	SCI.5.I.I.II.2	Understand that scientific conclusions are subject to peer and public review.
Integrating with Aeronautics	NM	SCI.5.I.I.I.3	Use graphic representations (e.g., charts, graphs, tables, labeled diagrams) to present data and produce explanations for investigations.
Intro to Aeronautics (109-123)	NM	SCI.5.I.I.II.1	Understand that different kinds of investigations are used to answer different kinds of questions (e.g., observations, data collection, controlled experiments).
Intro to Aeronautics (109-123)	NM	SCI.5.I.I.III.2	Use mathematical skills to analyze data.
Intro to Aeronautics (109-123)	NM	SCI.5.I.I.III.3	Make predictions based on analyses of data, observations, and explanations.
Scientific Method(124-144)	NM	SCI.5.I.I.I.1	Plan and conduct investigations, including formulating testable questions, making systematic observations, developing logical conclusions, and communicating findings.
Scientific Method(124-144)	NM	SCI.5.I.I.I.2	Use appropriate technologies (e.g., calculators, computers, balances, spring scales, microscopes) to perform scientific tests and to collect and display data.

Scientific Method(124-144)	NM	SCI.5.I.I.II.1	Understand that different kinds of investigations are used to answer different kinds of questions (e.g., observations, data collection, controlled experiments).
Scientific Method(124-144)	NM	SCI.5.III.I.I.1	Describe the contributions of science to understanding local or current issues (e.g., watershed and community decisions regarding water use).
Exploring Aeronautics			
2003 Science			
Content Standards			
New Mexico Science			
Grade 6			
Activity/Lesson	**State**	**Standards**	
Fundamentals of Aeronautics (145-176)	NM	SCI.6.I.I.I.1	Construct appropriate graphs from data and develop qualitative and quantitative statements about the relationships between variables being investigated.
Fundamentals of Aeronautics (145-176)	NM	SCI.6.II.I.III.1	Know that every object exerts gravitational force on every other object dependent on the masses and distance of separation (e.g., motions of celestial objects, tides).
Airplane Control(209-256)	NM	SCI.6.II.I.III.1	Know that every object exerts gravitational force on every other object dependent on the masses and distance of separation (e.g., motions of celestial objects, tides).
How an Airplane Flies	NM	SCI.6.II.I.III.1	Know that every object exerts gravitational force on every other object dependent on the masses and distance of separation (e.g., motions of celestial objects, tides).
How an Airplane Flies	NM	SCI.6.II.I.III.2	Know that gravitational force is hard to detect unless one of the objects (e.g., Earth) has a lot of mass.
The Activity Center	NM	SCI.6.II.I.III.1	Know that every object exerts gravitational force on every other object dependent on the masses and distance of separation (e.g., motions of celestial objects, tides).
Science of Flight	NM	SCI.6.I.I.I.3	Justify predictions and conclusions based on data.
Science of Flight	NM	SCI.6.I.I.II.2	Understand that scientific investigations use common processes that include the collection of relevant data and observations, accurate measurements, the identification and control of variables, and logical reasoning to formulate hypotheses and explanations.
Integrating with Aeronautics	NM	SCI.6.I.I.I.1	Construct appropriate graphs from data and develop qualitative and quantitative statements about the relationships between variables being investigated.

Integrating with Aeronautics	NM	SCI.6.I.I.II.2	Understand that scientific investigations use common processes that include the collection of relevant data and observations, accurate measurements, the identification and control of variables, and logical reasoning to formulate hypotheses and explanations.
Scientific Method(124-144)	NM	SCI.6.I.I.II.2	Understand that scientific investigations use common processes that include the collection of relevant data and observations, accurate measurements, the identification and control of variables, and logical reasoning to formulate hypotheses and explanations.
Exploring Aeronautics			
2003 Science			
Content Standards			
New Mexico Science			
Grade 7			
Activity/Lesson	**State**	**Standards**	
Tools of Aeronautics(257-326)	NM	SCI.7.I.I.I.2	Use models to explain the relationships between variables being investigated.
The Tools of Aeronautics	NM	SCI.7.I.I.I.2	Use models to explain the relationships between variables being investigated.
Science of Flight	NM	SCI.7.I.I.I.1	Use a variety of print and web resources to collect information, inform investigations, and answer a scientific question or hypothesis.
Science of Flight	NM	SCI.7.I.I.II.2	Critique procedures used to investigate a hypothesis.
Intro to Aeronautics (109-123)	NM	SCI.7.I.I.I.1	Use a variety of print and web resources to collect information, inform investigations, and answer a scientific question or hypothesis.
Intro to Aeronautics (109-123)	NM	SCI.7.I.I.III.2	Use mathematical expressions to represent data and observations collected in scientific investigations.
Scientific Method(124-144)	NM	SCI.7.I.I.I.1	Use a variety of print and web resources to collect information, inform investigations, and answer a scientific question or hypothesis.
Scientific Method(124-144)	NM	SCI.7.I.I.II.1	Describe how bias can affect scientific investigation and conclusions.
Scientific Method(124-144)	NM	SCI.7.I.I.II.2	Critique procedures used to investigate a hypothesis.
Scientific Method(124-144)	NM	SCI.7.I.I.III.2	Use mathematical expressions to represent data and observations collected in scientific investigations.
Exploring Aeronautics			
2003 Science			
Content Standards			
New Mexico Science			
Grade 8			
Activity/Lesson	**State**	**Standards**	
Fundamentals of Aeronautics (145-176)	NM	SCI.8.II.I.III.F.2	Know that a force has both magnitude and direction.

Fundamentals of Aeronautics (145-176)	NM	SCI.8.II.I.III.F.3	Analyze the separate forces acting on an object at rest or in motion (e.g., gravity, elastic forces, friction), including how multiple forces reinforce or cancel one another to result in a net force that acts on an object.
Fundamentals of Aeronautics (145-176)	NM	SCI.8.II.I.III.M.7	Know that an object's motion is always described relative to some other object or point (i.e., frame of reference).
Fundamentals of Aeronautics (145-176)	NM	SCI.8.II.I.III.M.8.a	Objects in motion will continue in motion and objects at rest will remain at rest unless acted upon by an unbalanced force (inertia).
Fundamentals of Aeronautics (145-176)	NM	SCI.8.II.I.III.M.8.b	If a greater force is applied to an object a proportionally greater acceleration will occur.
Fundamentals of Aeronautics (145-176)	NM	SCI.8.II.I.III.M.8.c	If an object has more mass the effect of an applied force is proportionally less.
Wings(177-208)	NM	SCI.8.II.I.I.PM.1	Know how to use density, boiling point, freezing point, conductivity, and color to identify various substances.
Airplane Control(209-256)	NM	SCI.8.II.I.III.F.3	Analyze the separate forces acting on an object at rest or in motion (e.g., gravity, elastic forces, friction), including how multiple forces reinforce or cancel one another to result in a net force that acts on an object.
Airplane Control(209-256)	NM	SCI.8.II.I.III.M.7	Know that an object's motion is always described relative to some other object or point (i.e., frame of reference).
Airplane Control(209-256)	NM	SCI.8.II.I.III.M.8.a	Objects in motion will continue in motion and objects at rest will remain at rest unless acted upon by an unbalanced force (inertia).
Airplane Control(209-256)	NM	SCI.8.II.I.III.M.8.b	If a greater force is applied to an object a proportionally greater acceleration will occur.
Airplane Control(209-256)	NM	SCI.8.II.I.III.M.8.c	If an object has more mass the effect of an applied force is proportionally less.
How an Airplane Flies	NM	SCI.8.II.I.III.F.1	Know that there are fundamental forces in nature (e.g., gravity, electromagnetic forces, nuclear forces).
How an Airplane Flies	NM	SCI.8.II.I.III.F.3	Analyze the separate forces acting on an object at rest or in motion (e.g., gravity, elastic forces, friction), including how multiple forces reinforce or cancel one another to result in a net force that acts on an object.
How an Airplane Flies	NM	SCI.8.II.I.III.M.8.a	Objects in motion will continue in motion and objects at rest will remain at rest unless acted upon by an unbalanced force (inertia).
How an Airplane Flies	NM	SCI.8.II.I.III.M.8.b	If a greater force is applied to an object a proportionally greater acceleration will occur.
How an Airplane Flies	NM	SCI.8.II.I.III.M.8.c	If an object has more mass the effect of an applied force is proportionally less.
The Tools of Aeronautics	NM	SCI.8.I.I.III.2	Create models to describe phenomena.

The Activity Center	NM	SCI.8.II.I.III.F.1	Know that there are fundamental forces in nature (e.g., gravity, electromagnetic forces, nuclear forces).
The Activity Center	NM	SCI.8.II.I.III.F.2	Know that a force has both magnitude and direction.
The Activity Center	NM	SCI.8.II.I.III.M.8.a	Objects in motion will continue in motion and objects at rest will remain at rest unless acted upon by an unbalanced force (inertia).
Science of Flight	NM	SCI.8.I.I.I.2	Use a variety of technologies to gather, analyze and interpret scientific data.
Science of Flight	NM	SCI.8.II.I.III.M.8.b	If a greater force is applied to an object a proportionally greater acceleration will occur.
Science of Flight	NM	SCI.8.II.I.III.M.8.c	If an object has more mass the effect of an applied force is proportionally less.
Integrating with Aeronautics	NM	SCI.8.II.I.III.F.3	Analyze the separate forces acting on an object at rest or in motion (e.g., gravity, elastic forces, friction), including how multiple forces reinforce or cancel one another to result in a net force that acts on an object.
Integrating with Aeronautics	NM	SCI.8.II.I.III.M.8.a	Objects in motion will continue in motion and objects at rest will remain at rest unless acted upon by an unbalanced force (inertia).
Integrating with Aeronautics	NM	SCI.8.II.I.III.M.8.b	If a greater force is applied to an object a proportionally greater acceleration will occur.
Integrating with Aeronautics	NM	SCI.8.II.I.III.M.8.c	If an object has more mass the effect of an applied force is proportionally less.
Intro to Aeronautics (109-123)	NM	SCI.8.II.I.III.F.3	Analyze the separate forces acting on an object at rest or in motion (e.g., gravity, elastic forces, friction), including how multiple forces reinforce or cancel one another to result in a net force that acts on an object.
Intro to Aeronautics (109-123)	NM	SCI.8.II.I.III.M.8.a	Objects in motion will continue in motion and objects at rest will remain at rest unless acted upon by an unbalanced force (inertia).
Intro to Aeronautics (109-123)	NM	SCI.8.II.I.III.M.8.b	If a greater force is applied to an object a proportionally greater acceleration will occur.
Scientific Method(124-144)	NM	SCI.8.I.I.I.2	Use a variety of technologies to gather, analyze and interpret scientific data.